

Amendment dated 04/19/06
Office Action dated 01/27/06

Application No. 10/021,917

REMARKS

Claims 1, 3-11, 13-24, 26-34, 36-44, and 46-55 are pending with this paper. Claims 1, 3-11, 13-24, 26-34, 36-44, and 46-55 are rejected by this Office Action. Applicant is amending independent claims 1, 11, 24, 34, and 44.

Applicant acknowledges the new grounds of rejection, in which Hillier is alleged to be prior art.

Other Amendments

Applicant is amending claim 55 to replace "an" with "the" because a proper antecedent basis is established in claim 1.

Claim Rejections – 35 U.S.C. § 112

Claims 1-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant is amending claim 1 to include the feature of "determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item on display, and the spatial allotment of the item" in order to clarify what is being claimed. (Emphasis added.) The amendment is supported by the specification as originally filed, e.g., page 10, lines 8-17. Applicant is similarly amending independent claims 11, 24, 34, and 44.

The Office Action alleges that (Page 3):

Claims 1, 11, 24, 34, 44 recite determining a profit function from a corresponding demand distribution for ... a probability associated with inventory replenishment. While the limitation states that the probability has something to do with inventory replenishment, what the probability is exactly for is not clear. Therefore, the claims are vague and indefinite as one of ordinary skill in the art could only guess

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at what about inventory replenishment the inventory replenishment the probability value is supposed to represent.

Claims 1, 11, 24, 34, and 44 are definite with respect to what the probability is exactly for. The Office Action further alleges that (Page 53):

Claim 55 recites, wherein the probability corresponds to finding any number of units of an item on a store shelf. It is unclear if the probability of finding is associated with finding units to replenish an item on a store shelf, or if the probability of finding is associated with just seeing if the item is physically and currently on a store [store] shelf.

Claim 55 depends from claim 1. The probability, as claimed in claim 55, is clarified by the amended feature of claim 1. Claims 2-10, 12-23, 25-33, 35-43, and 45-54 ultimately depend from claims 1, 11, 24, 34, and 44, respectively, and are definite for at least the above reasons. Thus, Applicant requests reconsideration of claims 1-55.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 3-11, 13-24, 26-34, 36-44, and 46-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Integer Programming Models for Sales Resource Allocation,” March 1980 (Zoltners) and “Introduction to Operations Research,” 1995 (Hillier).

Regarding claim 1, Applicant is amending claim 1 to include the features of “determining a spatial allotment of an item for displaying the item for sale” and “determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item on display, and the spatial allotment of the item” in order clarify what is being amended. The amendment is supported by the specification as originally filed. For example, the specification discloses (Page 2, lines 26-28):

According to another aspect the spatial allocations may include spatial allotments (e.g., widths of shelves). The method may be further specialized so that all allocations are physical allocations.

The specification further discloses (Page 9, line 26 – page 10, line 7.):

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Once the items arrive at the store, a stock clerk places some or all of them on a shelf in the sales area of the store. Customers arriving at random times deplete the on-shelf supply causing the replenishment system to begin the cycle again by ordering additional items. Since items of this type are frequently displayed in designated fixed-width areas on a shelf, the retailer must decide how much width to allocate to each item that goes on the shelf. In some cases the best decision is to allocate shelf width equal to the width of a single unit of the item. In other cases the retailer may wish to dedicate enough width so that two or more units may be placed beside each other on the shelf. In retail terminology this is referred to as deciding how many "facings" of an item will be placed on the shelf. In this scenario, the profit model calculates the profitability of each item as a function of the number of facings that are included on the shelf. More specifically the profit model calculates the profitability as function of the shelf width occupied by the facings.

Regarding claim 1, the Office Action admits (Page 5.):

While Zoltners discloses determining a model for sales resource allocation that maximizes profits using time periods and allocation strategies for sales entities, or products (page 8), Zoltners et al. does not expressly disclose that a profit function is determined for a time interval between restocking cycles and a probability that is associated with inventory replenishment.

The Office Action alleges that (Page 5.):

Hillier et al. discloses determining stochastic models using demand probability distribution functions to solve inventory-related problems (pages 772-774). More specifically, Hillier et al. discloses single period and two-period models that solve the problem of determining the amount of inventory to replenish for a time interval based on the probability of demand for the item (pages 773-775).

However, Hillier fails to even suggest determining a spatial allotment for an item and determining each profit function from the spatial allotment of the item. Moreover, Zoltners fails to remedy the deficiencies of Hillier.

Applicant is similarly amending independent claims 11, 24, 34, and 44. Claim 11 includes a processor that accesses the memory to retrieve computer-executable instructions to perform the features of "determining a spatial allotment of an item for displaying the item for sale" and "determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item

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on display, and the spatial allotment of the item." Claim 24 includes a processor that accesses the memory to retrieve computer-executable instructions to perform the features of "determining a spatial allotment of an item for displaying the item for sale" and "determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item on display, and the spatial allotment of the item." Also, claim 34 includes "a profit-model unit, the profit-model unit being connected to the data unit, and the profit-model unit including executable instructions for determining profit functions for the allocations from the profit data, wherein determining the profit functions includes: determining demand distributions for the allocations from the profit data; determining a spatial allotment of an item for displaying the item for sale; and determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item on display, and the spatial allotment of the item." Claim 44 includes executable instructions for "determining a spatial allotment of an item for displaying the item for sale" and "determining each profit function from a corresponding demand distribution for a time interval between restocking cycles, a probability of finding a given number of units of the item on display, and the spatial allotment of the item."

Because claims 3-10 and 54-55, 13-23, 26-33, 36-43, and 46-53 ultimately depend from claims 1, 11, 24, 34, and 44, respectively, claims 3-10 and 54-55, 13-23, 26-33, 36-43, and 46-53 are patentable for at least the above reasons. Applicant requests reconsideration of claims 1, 3-11, 13-24, 26-34, 36-44, and 46-55.

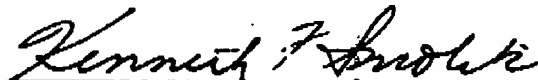
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All objections and rejections have been addressed. Hence, it is respectfully submitted that the present application is in condition for allowance, and a notice to that effect is earnestly solicited.

Respectfully submitted,

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